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ABSTRACT

This document presents data on the frequency with which senior high school industrial education teachers perform their professional tasks as reported by the teachers in a study during the 1971-72 academic year. Also presented are data which show the importance which these senior high school industrial education teachers attach to their professional tasks. The document contains seven tables and two appendixes. This study was part of a larger study of junior, junior-senior, senior, and capstone teachers of industrial education subjects in Wisconsin for the purpose of re-evaluating the B.S., M.S., and Ed.S. degree programs in industrial education at the University of Wisconsin-Stout. (Author/DDO)

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Development of a Base for the Re-evaluation of the Professional Segment of the Master of Science Degree Program in Industrial Education at the University of Wisconsin-Stout

Part IV: Frequency and Importance of Their Professional Tasks as Reported by Wisconsin Senior High School Industrial Education Teachers

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STATEMENT OF THE PROBLEM

In these pages is reported a study of the professional tasks of Wisconsin senior high school industrial education teachers.

More specifically, data are presented in response to two questions:

1. With what frequency do Wisconsin senior high school industrial education teachers perform professional tasks?

2. What importance rating do Wisconsin senior high school industrial education teachers assign to professional tasks?

RELATION TO OTHER STUDIES

In August of 1972, a paper was prepared which reviewed the development of the task analysis studies at UW-Stout up to that point in time.[1]

Since this study is based upon that development, the following outline of it is presented for information:

Introduction
Need for Role Descriptions
Program Development Model
Position Paper Implications
Identification of Tasks
Development of Task Analysis
  Survey Instruments
Processing the Data

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[1]Lawrence S. Wright, Development of Task Analysis Studies in Industrial Education; Graduate College, University of Wisconsin-Stout, Menomonie, Wisconsin, August, 1972.

Also, in the summer of 1972, a study was completed by six graduate students at UW-Stout.[2] This paper examined the professional tasks of Wisconsin industrial arts teachers (1) who taught in any or all of grades 7, 8 and/or 9 whether they also taught in senior high school or not, (2) who taught in any or all of grades 10, 11 or 12 whether they also taught in junior high school or not, and (3) who taught Capstone industrial education courses.

In the belief that a more detailed study of those who taught only grades 7, 8 and/or 9; those who taught 7, 8 and/or 9 and 10, 11 and/or 12; those who taught 10, 11 and/or 12 but not Capstone courses; and those who taught Capstone courses without regard to other levels at which they might be teaching; this study was undertaken.

This study is Part IV in the following series:

Part I:	Introduction to the Problem
Part II:	Frequency and Importance of Their Professional Tasks as Reported by Wisconsin Junior High School Industrial Arts Teachers
Part III:	Frequency and Importance of Their Professional Tasks as Reported by Wisconsin Junior-Senior High School Industrial Arts Teachers
Part IV:	Frequency and Importance of Their Professional Tasks as Reported by Wisconsin Senior High School Industrial Education Teachers
Part V:	Frequency and Importance of Their Professional Tasks as Reported by Wisconsin Capstone Industrial Education Teachers

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[2]Daniel Fara, et.al., "Professional Tasks of the Wisconsin Industrial Education Teacher" (unpublished Plan B investigation, University of Wisconsin-Stout, 1972.)

Part VI: Frequency and Importance of Their Professional Tasks as Reported by All Wisconsin Secondary School Industrial Education Teachers

Part VII: Significant Differences Between Selected Wisconsin Industrial Education Teacher Groups with Respect to (1) Frequency and (2) Importance of Their Professional Tasks

Part VIII: Importance of Industrial Education Teacher's Professional Tasks as Seen by a Jury of Selected Leaders in Education, Together with Significant Differences Between Responses of Selected Wisconsin Industrial Education Teacher Groups and the Jury

DISTRIBUTION OF SENIOR HIGH SCHOOL INDUSTRIAL EDUCATION TEACHERS BY GRADE LEVEL

In the effort to learn at what grade level Wisconsin industrial education teacher-respondents were teaching, they were asked to respond to the following item:

> "Check each of the levels in which you are teaching one or more industrial education subjects this year":

___6th grade ___8th grade ___10th grade ___12th grade

___7th grade ___9th grade ___11th grade ___Capstone

Data presented in Table 1 are those related to the senior high school grades. It may be noted that 153 or 75 percent of the senior high school respondents reported teaching industrial education subjects in each of the grades 10, 11, and 12 during the 1971-72 school year.

TABLE 1

Numbers and Percent of Wisconsin Industrial Education Teachers and the Senior High School Grade-Levels in Which They Reported Teaching One or More Industrial Education Subjects During the 1971-72 Academic Year

Grade Levels	Number	Percent
10	4	2.0
11	0	
12	8	3.9
10 and 11	7	3.4
10 and 12	2	1.0
11 and 12	30	14.7
10, 11 and 12	153	75.0
Totals	204	100.0

TEACHING EXPERIENCE

Respondents were asked to indicate within categories the number of years of teaching experience including the current year (1971-72). Data presented in Table 2 show a fairly uniform distribution within the categories ranging from 30 or 15.3 percent with from 11 to 15 years to 55 or 28.1 percent with more than 15 years of experience.

TABLE 2

Teaching Experience of 196 Wisconsin Senior High School Industrial Education Teachers

Teaching Experience in Years	Number of Teachers	Percent
1 - 2	37	18.9
3 - 5	33	16.8
6 - 10	41	20.9
11 - 15	30	15.3
More than 15	55	28.1
Total	196	100.0

FREQUENCY RATINGS

Data are presented in Appendix A which show the frequency rating assigned each first-level, second-level and third-level task as reported by those teaching industrial education subjects in the 10th, 11th and/or 12th grade levels in Wisconsin during the 1971-72 academic year. These ranks are assigned on the basis of the median value. The interquartile range is a measure of agreement among those responding.

It may be of interest to note the ranking by senior high school industrial arts teachers of the frequency with which they perform first-level tasks. (It may be recalled that these are cumulations of their responses to the third-level tasks.) These data are presented in Table 3.

TABLE 3

Ranking of Frequency of First-Level Tasks
by Senior High School Industrial
Education Teachers

Rank	Code Number	First-Level Task
1	5.0	Facilitate Learning
2	4.0	Nurture Humaneness
3	6.0	Manage Learning Environment
4	3.0	Design Instruction
5	9.0	Evaluate Instruction
6	1.0	Improve Individual's Competencies
7	10.0	Evaluate Programs
8	2.0	Design Programs
9	7.0	Provide Professional Service
10	8.0	Utilize Research

The summary of the distribution of frequency ratings by first-, second-, and third-level tasks may be seen in Table 4.

IMPORTANCE RATINGS

Data are presented in Appendix B which show the importance rating assigned each first-level, second-level and third-level task as reported by those teaching industrial education subjects in the 10th, 11th and/or 12th grade levels in Wisconsin during the 1971-72 academic year. The ranks

TABLE 4

Interpretation of Median (Mdn) Values of Frequency of Ratings by Wisconsin Senior High School Industrial Education Teachers

Range of Median Values	Frequency Interpretation	Tasks					
		First-level		Second-level		Third-level	
		N	%	N	%	N	%
4.500 and higher	Weekly or more often	0	0	6	10.5	56	17.1
3.500 - 4.499	About Once per Grading Period (6-9 weeks)	3	30	14	24.5	67	20.5
2.500 - 3.499	About Once per Semester	5	50	21	36.8	100	30.6
1.500 - 2.499	About Once per Year	2	20	10	17.5	66	20.2
1.499 and lower	Do Not Perform	0	0	6	10.5	38	11.6

are assigned on the basis of the median value. The interquartile range is a measure of agreement among those responding.

It may be of interest to note the ranking by senior high school industrial arts teachers of the importance they attach to the first-level tasks. (It will be recalled that these are cumulations of their responses to the third-level tasks.) Data are presented in Table 5.

The summary of the distribution of importance ratings by first-, second-, and third-level tasks may be seen in Table 6.

TABLE 5

Ranking of Importance of First-Level Tasks
by Senior High School Industrial
Education Teachers

Rank	Code Number	First-Level Tasks
1	5.0	Facilitate Learning
2	6.0	Manage Learning Environment
3	1.0	Improve Individual's Competencies
4	4.0	Nurture Humaneness
5	3.0	Design Instruction
6	10.0	Evaluate Programs
7	9.0	Evaluate Instruction
8	7.0	Provide Professional Service
9	2.0	Design Programs
10	8.0	Utilize Research

TASKS RECEIVING LOW RATINGS

An examination was made of the tasks which received low ratings. Low ratings for frequency were those reported as "do not perform" by the median value of the respondents. Low ratings for importance were those reported as "unimportant" or as "slightly important" by the respondents. These tasks were identified in Table 7.

TABLE 6

Interpretation of Median (Mdn) Values of Importance Ratings by Wisconsin Senior High School Industrial Education Teachers

Range of Median Values	Frequency Interpretation	Tasks					
		First-level		Second-level		Third-level	
		N	%	N	%	N	%
4.500 and higher	Essential	0	0	4	7.0	50	15.2
3.500 - 4.499	Very Important	8	80	37	64.9	166	50.7
2.500 - 3.499	Moderately Important	2	20	14	24.5	91	27.8
1.500 - 2.499	Slightly Important	0	0	2	3.5	17	5.1
1.499 and lower	Unimportant	0	0	0	0	3	0.9

TABLE 7

Tasks Receiving Low Frequency and/or Importance Ratings by Senior High School Industrial Education Teachers

Code Number	Task	Do Not Perform	Slightly Important
	THIRD-LEVEL TASKS		
2.2.8	Select published taxonomy or develop a taxonomy of industry	X	
2.3.1	Identify various group cultures that may compose target populations for programs	X	X
2.7.2	Consult with industrial and educational advisory board	X	
2.7.4	Maintain a program-level instruction evaluation log book	X	
2.7.5	Prepare follow up studies of graduates of the program	X	
4.1.7	De-emphasize inter-student competition in the classroom as a basis for student achievement		X
6.4.6	Keep records of federal and state funding programs	X	X
7.2.3	Initiate and organize special community service committees as needed	X	X
7.2.4	Participate in school accreditation visits	X	
7.3.3	Serve as class advisor	X	
7.3.4	Sponsor student club activities	X	X
7.5.1	Organize and conduct workshops and in-service educational programs	X	
7.5.2	Develop adult evening extension programs	X	X
7.5.3	Initiate remedial and summer programs for students	X	

Code Number	Task	Do Not Perform	Slightly Important
	THIRD-LEVEL TASKS		
7.5.4	Serve as advisor to educational suppliers in development of new resources and instructional materials	X	
7.6.2	Write reviews of new tests, instructional aids, and media for education journals	X	X
7.6.3	Develop written instructional materials for publication	X	X
7.7.2	Prepare the class for the arrival of student teachers	X	
7.7.3	Assign teaching responsibilities to student teacher	X	
7.7.4	Create situations so that the student teacher can initiate the instruction activities	X	
7.7.5	Hold conferences with student teacher regarding his performance, progress and problems	X	
7.7.7	Observe student teachers' performance in the classroom	X	
7.7.8	Offer criticism, encouragement and suggestions in joint evaluation with student-teacher	X	
7.7.9	Make formal evaluations of student-teacher's performance	X	
8.2.1	Develop a concise statement of the research problem		X
8.2.2	Write a rationale for a research study including a review of literature	X	X*
8.2.3	Formulate objectives or hypotheses to be answered through research study		X
8.2.4	Select and describe the research design to be used in a proposed research study	X	
8.2.5	Select a population for a particular research study	X	X
8.2.7	Develop a management strategy for the control of the research study	X	X

Code Number	Task	Do Not Perform	Slightly Important
	THIRD-LEVEL TASKS		
8.2.8	Prepare a budget estimate in fiscal terms for a research study	X	
8.2.9	Submit research proposal to appropriate funding bodies	X	X
8.3.2	Analyze and interpret data collected for research studies		X
8.4.1	Complete preparation of preliminary draft of research report, e.g.: introduction, methods, body, conclusions, implications, bibliography, appendices	X	X
8.4.2	Formally review and revise preliminary draft of research report	X	X
8.4.3	Complete final draft of research report	X	X*
8.5.3	Organize and set-up pilot programs in cooperation with other researchers	X	
8.6.6	Evaluate the conclusions of a research report	X	X
9.2.8	Use computer to assist in analyzing test results	X	X*
9.3.5	Administer standardized tests	X	
10.1.5	Select (or design) and administer tests of psychomotor abilities for evaluation of programs	X	
10.1.6	Consult advisory committees to determine quality of instructional program	X	
	SECOND-LEVEL TASKS		
7.2	Participate in service activities of the educational and civic community	X	
7.5	Develop programs of professional service	X	
7.6	Contribute to literature of the field through technical and/or professional writing	X	
7.7	Supervise student teachers	X	

Code Number	Task	Do Not Perform	Slightly Important
	SECOND-LEVEL TASKS		
8.2	Prepare proposals for researching a problem	X	X
8.4	Write research reports	X	X
	FIRST-LEVEL TASKS		
	No first-level tasks were reported as "do not perform," "unimportant," or "slightly significant."		

*This task was rated as "unimportant."

SUMMARY

Data has been presented which show the frequency with which Wisconsin senior high school industrial education teachers report that they perform their professional tasks.

Data has also been presented which show the importance which Wisconsin senior high school industrial education teachers attach to their professional tasks.

These data are part of a larger study of junior, junior-senior, senior high school and capstone teachers of industrial education subjects in Wisconsin for the purpose of re-evaluating the B.S., M.S., and Ed.S. degree programs in industrial education at UW-Stout.

APPENDIX A

FREQUENCY OF TASKS PERFORMED

Tasks of Wisconsin Senior High School Industrial Education Teachers Ranked by Median (Mdn) Value of their Response to "Frequency of Performance" and Including Interquartile Rante (IQR)

Rank Order	Median (mdn)	IQR	Code	Tasks
1	4.479	1.579	5.0	FACILITATE LEARNING
1	4.587	1.491	5.3	Interact with students in a positive manner.
1	4.928	0.571	5.3.3	Express interest in students
2	4.916	0.583	5.3.8	Express enthusiasm for your students and the subject matter
3	4.818	0.784	5.3.2	Establish atmosphere for positive group interaction
4	4.809	0.779	5.3.10	Demonstrate an attitude of fairness and commitment on issues important to students
5	4.725	1.662	5.3.11	Use knowledge of students as a basis for positive interaction during instruction
6	4.631	1.284	5.3.1	Use processes of perceiving, communicating, knowing, co-responding patterning, decision-making, creating, valuing, problem solving, and learning in interacting with students
7	4.333	1.214	5.3.4	Make provision for student input into instruction
8	4.321	1.301	5.3.7	Provide students with clear understandings of what is expected of them and what they can expect from their teacher
9	3.958	1.854	5.3.6	Use student interests in planning student activity
10	3.366	1.890	5.3.5	Plan individualized instruction with studerts
11	3.187	2.443	5.3.9	Recognize and interact with subcultures unique to the student population
2	4.586	1.253	5.2	Motivate students.
1	4.896	0.603	5.2.2	Win the students' attention and maintain level of arousal
2	4.809	0.748	5.2.6	Reward student achievement
3	4.690	1.238	5.2.5	Recognize and encourage evidences of response to internal motivation
4	4.555	1.152	5.2.3	Vary classroom routine to prevent monotony and boredom
5	4.525	0.999	5.2.8	Provide students immediate feedback to tests
6	4.450	1.257	5.2.7	Recognize and react to behavior which merits no reward
7	4.187	1.698	5.2.4	Recognize and encourage evidences of response to external motivation
8	3.208	1.645	5.2.1	Determine the entering dispositions of individual students

Rank Order	Median (mdn)	IQR	Code	Tasks
3	4.289	1.861	5.4	Adjust plans and strategies based on observed feedback from students.
1	4.820	0.784	5.4.8	Be sensitive to non-verbal feedback
2	4.676	1.159	5.4.2	Modify instructional methods in the light of student feedback
3	4.650	1.262	5.4.6	Capitalize on spontaneous student interests
4	4.500	1.318	5.4.5	Recognize and respond to external factors which influence planned instruction
5	4.450	1.257	5.4.1	Be sensitive to solicited and unsolicited student feedback
6	3.791	2.006	5.4.3	Adjust the learning environment (facilities) to provide optimum learning conditions
7	3.500	2.387	5.4.4	Revise time allocations for instructional plans and strategies based on student feedback
8	2.777	1.781	5.4.7	Make final decisions on placement of instructional sequences for optimum effectiveness
4	4.240	1.914	5.1	Execute instructional plans and strategies.
1	4.964	0.535	5.1.4	Present lessons and related demonstrations
2	4.892	0.607	5.1.5	Be aware of whether students are working safely and take appropriate preventative and corrective measures
3	4.357	1.183	5.1.3	Make students aware of instructional intent and proposed outcomes of instruction
4	4.090	1.683	5.1.6	Use educational resources in executing instructional plans
5	4.000	1.630	5.1.1	Identify individual needs of students
6	3.181	1.512	5.1.2	Find out what students expect from the instruction
7	2.250	1.993	5.1.7	Conduct field trips and other outside-class activities
5	4.154	1.544	5.5	Teach the substantive content of the field.
1	4.566	1.283	5.5.5	Provide experiences which contribute to the teaching of students to use processes, e.g., perceiving, communicating, learning, decision-making, organizing, co-responding, creating, valuing, problem-solving
2	4.323	1.141	5.5.4	Provide experiences which some students may use as a base for developing avocational activities
3	4.090	1.614	5.5.1	Provide experiences which will contribute to the student's understanding of industry as a major element in our culture

Rank Order	Median (mdn)	IQR	Code	Tasks
4	3.875	1.979	5.5.3	Provide experiences for some students to prepare them for entry into appropriate industrially related occupations or to develop a base for advanced occupational education
5	3.687	2.281	5.5.2	Provide exploratory experience related to industry which will provide some students a basis for selecting an occupation and will provide all students respect for the pursuits of others

Rank Order	Median (mdn)	IQR	Code	Tasks
2	3.848	2.034	4.0	NURTURE HUMANENESS
1	4.548	1.497	4.1	Nurture humaneness with students.
1	4.879	0.620	4.1.4	Encourage, recognize and acknowledge original ideas of students--even though imperfect and unfinished
2	4.875	0.625	4.1.5	Take time to listen to students and acknowledge their ideas and commitments as being worthy of expression
3	4.869	0.630	4.1.3	Maintain atmosphere where adventure in learning is encouraged without fear of consequences of failure
4	4.840	0.659	4.1.2	Admit that teachers also make mistakes and learn from them
5	4.673	1.136	4.1.9	Encourage students to know that they are respected as individuals
6	4.619	1.403	4.1.11	Extend the positive student-teacher relationship to include informal contacts
7	4.500	1.750	4.1.10	Provide personal guidance to students
8	4.156	1.053	4.1.1	Encourage students to think of alternatives and to recognize knowledge as imperfect, incomplete, and tentative
9	4.041	1.569	4.1.8	Develop group and team learning situations to foster in students a mutual concern for one another
10	3.950	1.744	4.1.6	Help students interpret their relationship to their environment
11	2.166	2.744	4.1.7	De-emphasize inter-student competition in the classroom as a basis for student achievement
2	3.857	1.955	4.4	Nurture humaneness to one's self.
1	4.357	1.899	4.4.1	Employ teacher traits in balance between those required for individual self-fulfillment and those required for successful teaching
2	3.375	1.723	4.4.2	Reassess personal objectives and take action to continue growth towards self-actualizing
3	3.772	1.854	4.2	Nurture humaneness with the school staff.
1	4.763	0.964	4.2.1	Accept assistance from and give assistance to fellow staff members
2	4.710	1.188	4.2.5	Employ tact and judgment in interacting with other school staff members
3	3.666	1.758	4.2.2	Obtain and lend assistance to school projects being developed by other staff members

Rank Order	Median (mdn)	IQR	Code	Tasks
4	3.291	1.461	4.2.4	Serve on and cooperate with school staff committees
5	3.235	1.045	4.2.3	Participate in school staff social events
6	3.115	1.616	4.2.6	Offer recommendations in matters of school policy
4	2.877	1.834	4.3	Nurture humaneness with parents and community.
1	3.187	2.083	4.3.1	Participate in community activities and service organizations
2	3.115	1.211	4.3.4	Make provisions for personal contacts with parents concerning the progress of their children
3	2.916	2.312	4.3.5	Identify and respect goals parents have for their children
4	2.888	1.871	4.3.6	Become familiar with services provided by the community, e.g.; public library, museums, other schools, cultural center, etc.
5	2.847	1.115	4.3.3	Participate in parent-teacher functions
6	2.770	1.941	4.3.7	Work with community service personnel, e.g.; Librarians, social workers, clergy, training schools
7	1.666	2.229	4.3.2	Evidence interest in graduated students

Rank Order	Median (mdn)	IQR	Code	Tasks
3	3.795	2.575	6.0	MANAGE LEARNING ENVIRONMENT
1	4.734	1.177	6.3	Provide for maintenance.
1	4.826	0.713	6.3.4	Test and adjust tools and equipment prior to returning them to use after maintenance
2	4.710	1.730	6.3.1	Develop and carry out a routine preventative maintenance schedule
3	4.687	1.250	6.3.2	Diagnose maintenance problems in tools and equipment
4	4.538	1.669	6.3.3	Provide for maintenance by servicing or referral for service as appropriate
2	4.703	1.275	6.5	Respond to social-emotional climate.
1	4.939	0.560	6.5.2	Demonstrate firmness, fairness and consistency in dealing with discipline problems
2	4.920	0.580	6.5.7	Establish rapport and empathy with students
3	4.919	0.580	6.5.5	Be responsive to human needs of student
4	4.694	1.222	6.5.1	Identify internal and external causes of discipline problems
5	4.562	1.459	6.5.4	Use rewards and punishment to control deviant behavior
6	4.400	1.314	6.5.3	Develop alternate strategies for alleviating conditions which cause discipline problems
7	3.100	2.194	6.5.6	Use self-evaluation techniques regarding your inter-relationship with students
3	4.624	2.270	6.4	Maintain records and filing systems.
1	4.982	0.517	6.4.1	Keep attendance records for each class taught
2	4.964	0.535	6.4.5	Keep records of student grades for each class taught
3	4.879	0.620	6.4.2	Keep student progress records for each class
4	4.750	0.937	6.4.4	Keep a record of purchase orders and inventories
5.5	4.000	2.527	6.4.7	Keep an up-to-date industrial and educationl supply catalog file
5.5	4.000	2.580	6.4.3	Keep equipment and tool inventories
7	1.150	0.649	6.4.6	Keep records of federal and state funding programs
4	4.435	1.716	6.6	Establish physical conditions conducive to learning.
1	4.920	0.580	6.6.1	Maintain control of comfortable temperature, lighting, and noise levels in classrooms and laboratories

Rank Order	Median (mdn)	IQR	Code	Tasks
2	4.750	1.125	6.6.3	Establish classroom procedures which avoid confusion and provide freedom of movement to students
3	3.500	1.588	6.6.2	Take actions to enhance the room interior with displays, bulletin boards, etc.
5	3.000	2.017	6.2	Requisition and receive supplies and materials.
1	4.000	1.879	6.2.4	Receive and check in supplies and materials
2	3.291	1.244	6.2.1	Take inventory of supplies and materials
3	3.200	2.059	6.2.3	Order new educational materials and supplies
4	2.000	0.666	6.2.2	Prepare budgets for formal approval
6	2.449	1.908	6.1	Plan for and organize the facilities needed for the program.
1	4.050	1.875	6.1.4	Consult catalogs of industrial and educational supplies for specification of equipment available
2	3.125	2.177	6.1.5	Prepare a list of specific equipment and tools appropriate to program level and needs
3	2.909	1.883	6.1.3	Plan layout for effective space utilization to meet program needs
4	2.541	1.213	6.1.7	Make an immediate and long range plan for acquisition of equipment and tools
5	2.100	1.366	6.1.2	Write a program statement for your shop or laboratory
6	2.090	1.785	6.1.1	Identify and develop an industrial education program and the facility to house it
7	2.086	0.673	6.1.8	Prepare, submit, and defend budget requests for equipment and tools

Rank Order	Median (mdn)	IQR	Code	Tasks
4	3.420	2.141	3.0	DESIGN INSTRUCTION
1	4.167	1.935	3.5	Select teaching activities and strategies.
1	4.593	1.505	3.5.2	Integrate learning and teaching activities into instructional plans
2	4.375	1.768	3.5.3	Make decisions concerning the extent to which the instruction is to be individualized
3	3.650	2.149	3.5.1	Plan strategies for teaching including meeting the needs of special groups
2	3.951	2.093	3.9	Prepare lesson plans for group and individualized instruction.
1	4.750	1.041	3.9.2	Identify and select learning acitvities for students
2	4.694	1.347	3.9.6	Keep records of lessons planned and suggestions for improvement
3	4.529	1.375	3.9.7	Sequence presentation of instructional materials
4	3.500	2.437	3.9.3	Identify and select appropriate teacher activities
5	3.444	1.611	3.9.4	Identify and select appropriate learning resources
6	3.285	2.808	3.9.1	Write objectives for lesson plans
7	3.214	1.545	3.9.5	Validate content against levels within domains for lesson plans
3	3.885	1.847	3.4	Develop (or identify) student learning activities appropriate to each behavioral objective (make the content operational).
1	4.694	1.132	3.4.6	Plan experiences which will contribute to teaching students how to use processes, e.g.; perceiving, communicating, learning, decision-making, organizing, co-responding, creating, valuing, problem solving
2	4.500	1.583	3.4.5	Plan experiences which some students may use as a base for developing avocational activities
3	3.916	1.626	3.4.7	Develop alternative learning activities to provide for individual student needs
4.5	3.611	1.756	3.4.3	Plan exploratory experiences related to industry which will provide some students a base for occupational choice and all students a respect for the pursuits of others

Rank Order	Median (mdn)	IQR	Code	Tasks
4.5	3.611	1.993	3.4.4	Plan experiences for some students which will prepare them for entry into industrially related occupations or to develop a base for advanced occupational education
6	3.500	2.208	3.4.1	Consult resources to identify learning activities
7	3.437	1.687	3.4.2	Plan experiences which will contribute to the students' understanding of industry as a major element in our culture
4	3.633	1.880	3.6	Identify and prepare instructional resources.
1	4.847	0.652	3.6.5	Prepare instructional materials
2	3.791	1.597	3.6.4	Review and select written resources for instruction
3	3.375	1.666	3.6.1	Review and select personnel resources
4	3.277	1.750	3.6.3	Review and select audio-visual resources
5	3.000	1.653	3.6.2	Review and select industrial resources
5	3.391	2.354	3.1	Write performance objectives for each course.
1	4.625	1.118	3.1.2	Identify student behavior or product of student behavior
2	3.821	1.502	3.1.4	Identify performance standard for performance objectives
3	3.200	2.239	3.1.3	Identify conditions under which student behavior modification will take place
4	2.406	1.703	3.1.5	Write the performance objective at the appropriate level and domain
5	2.333	2.062	3.1.1	Identify student population who will receive instruction
6	3.186	2.132	3.7	Develop a strategy for evaluating instruction.
1	4.450	1.410	3.7.4	Plan for written and manipulative performance tests
2	3.300	1.782	3.7.2	Formulate a grading policy and plans for making it known to students
3	2.944	1.895	3.7.3	Plan for self-evaluation techniques to be used by students
4	2.571	2.187	3.7.1	Decide whether evaluation will employ norm-based or mastery grading procedures
5	2.409	2.030	3.7.5	Plan for student evaluation of course
7	3.125	1.585	3.2	Organize objectives into appropriate sequences.
1	3.727	1.678	3.2.2	Group and sequence performance objectives into appropriate units of instruction

Rank Order	Median (mdn)	IQR	Code	Tasks
2	2.833	1.616	3.2.1	Identify which objectives are dependent on other objectives for their attainment
8	2.991	1.839	3.3	Validate content against domains and against levels within domains.
1	3.647	1.324	3.3.3	Make adjustments to content within domains to obtain needed balance
2	3.423	1.275	3.3.6	Make any needed adjustments to content by levels within each domain
3	2.818	1.446	3.3.4	Decide which levels within each domain should be represented and the balance of content that should be devoted to each
4	2.642	1.787	3.3.5	Observe whether the desired levels within domains are represented and what their balance is
5	2.454	1.656	3.3.1	Decide whether each domain should be represented and the balance of content which should be devoted to each
6	1.800	2.119	3.3.2	Observe that the desired domains are represented and what their balance is
9	2.171	1.226	3.8	Organize and complete the course of study.
1	2.928	1.986	3.8.3	Prepare a time-range plan suggesting a range of time allotted to each unit of instruction
2	2.222	1.111	3.8.2	Write course description
3	2.038	1.061	3.8.4	Arrange for the preparation of total course of study copy and subsequent distribution
4	2.000	0.600	3.8.1	Write introduction to course of study

Rank Order	Median (mdn)	IQR	Code	Tasks
5	3.395	2.573	9.0	EVALUATE INSTRUCTION
1	4.167	1.207	9.1	Assess whether students have assimilated the material presented.
1	4.230	1.167	9.1.1	Use the evaluation policy which was previously made known to students
2	4.153	1.178	9.1.2	Determine whether students met performance standards
3	4.115	1.272	9.1.3	Apply methods to be used to evaluate instruction
2	3.390	2.009	9.4	Determine efficiency and effectiveness of instruction.
1	4.333	1.880	9.4.6	Determine whether students are generally happy with the instruction received
2	4.214	0.866	9.4.5	Appraise student performance in relation to instructional goals
3	3.194	1.444	9.4.2	Consult with colleagues regarding assessment of your teaching
4	3.071	2.166	9.4.1	Analyze and interpret results of instructional measurement
5	2.888	2.041	9.4.3	Analyze student evaluation of instruction
6	2.142	2.155	9.4.4	Compare pretest and posttest results
3	3.174	2.953	9.3	Administer evaluative experiences.
1	4.104	0.827	9.3.3	Administer written and manipulative performance tests
2	3.333	2.300	9.3.2	Conduct student self-evaluation procedures
3	3.000	3.437	9.3.4	Maintain a daily instruction evaluation log book
4	2.833	2.972	9.3.1	Administer pretests and posttests
5	1.250	1.125	9.3.5	Administer standardized tests
4	2.960	2.665	9.2	Construct and evaluate measuring instruments and procedures.
1	3.750	2.093	9.2.2	Formulate devices to measure cognitive (knowledge-type) behavior
2	3.722	2.125	9.2.7	Evaluate tests in terms of useability, objectivity, difficulty, and discrimination
3	3.500	1.770	9.2.5	Develop pretests and posttests
4.5	3.125	2.666	9.2.3	Formulate devices to measure affective behavior (e.g.; attitudes and values)
4.5	3.125	1.763	9.2.6	Analyze test instrument validity and reliability
6	3.000	2.363	9.2.1	Devise self-evaluation techniques for use by students

Rank Order	Median (mdn)	IQR	Code	Tasks
7	2.500	2.687	9.2.4	Formulate devices to measure psychomotor (manipulative skill type) behavior
8	1.015	0.515	9.2.8	Use computer to assist in analyzing test results

Rank Order	Median (mdn)	IQR	Code	Tasks
6	3.122	2.284	1.0	IMPROVE INDIVIDUAL'S COMPETENCIES
1	3.868	1.996	1.1	Provide for re-generation and development of competencies.
1	4.593	1.185	1.1.3	Independently accept and solve technical and other problems related to teaching assignments
2	3.937	2.062	1.1.2	Improve your technical skills
3	3.750	1.854	1.1.1	Regenerate teaching skills and strategies
4	3.583	2.495	1.1.4	Accept professional assignments
5	3.416	2.026	1.1.5	Improve skills of interaction with others
2	2.833	1.951	1.3	Use self-evaluation techniques.
1	3.681	1.818	1.3.2	Participate in self-evaluation techniques
2	3.227	1.749	1.3.4	Periodically self-reflect and evaluate education and life philosophies
3	2.857	1.309	1.3.3	Consult supervisory and administrative evaluations for self-improvement
4	1.937	0.875	1.3.1	Select a teaching position for which you feel qualified
3	2.500	2.166	1.2	Keep up with development in the field.
1	4.695	1.072	1.2.2	Read current professional literature for self-improvement
2	2.818	1.685	1.2.1	Attend in-service seminars and workshops
3	2.500	1.777	1.2.5	Visit industries and consult with professional and technical personnel
4	2.392	1.875	1.2.3	Pursue further formal technical and professional education for self-improvement
5	2.083	0.805	1.2.6	Subscribe to educational and technical journals
6	2.020	0.645	1.2.4	Maintain membership in professional and technical organizations

Rank Order	Median (mdn)	IQR	Code	Tasks
7	2.809	2.074	10.0	EVALUATE PROGRAMS
1	3.523	1.869	10.3	Determine output characteristics of students.
1	3.976	0.952	10.3.1	Assess the degree of student achievement of program objectives
2	3.904	0.785	10.3.5	Determine whether students enjoy the curriculum and are generally happy with it
3	3.000	1.935	10.3.4	Compare present students achievement with previous student achievements in the program
4	2.750	1.666	10.3.3	Determine the degree to which the industrial education program satisfies societal, industrial and individual needs
5	2.100	1.875	10.3.2	Review program-level follow-up studies to ascertain the usefulness of material learned
2	3.311	1.880	10.4	Determine effectiveness of program implementation.
1	3.863	1.737	10.4.2	Evaluate quality of instruction and teacher-student interrelationship within the program
2	3.733	1.808	10.4.4	Assess adequacy of instructional materials for carrying out learning activities at the program level
3	3.454	1.555	10.4.5	Assess appropriateness of learning activities to the program
4	2.961	1.270	10.4.6	Review sequences of courses comprising the program
5	2.916	2.181	10.4.3	Determine appropriateness of course objectives in fulfilling student needs at the program-level
6	2.687	1.944	10.4.1	Assess validity of original sources of curriculum content at the program level
3	2.663	1.732	10.2	Assess factors influencing program.
1	3.291	1.686	10.2.3	Review adequacy and utilization of facilities for program
2	2.692	1.306	10.2.1	Determine interests, abilities and experiences of students entering the program
3	2.500	2.000	10.2.2	Review teacher competencies with respect to program-level goals
4	2.333	1.687	10.2.4	Determine utilization made of community resources in program-level development
5	2.187	1.763	10.2.5	Determine the degree of articulation with general, college preparatory and vocational programs

Rank Order	Median (mdn)	IQR	Code	Tasks
4	1.966	1.860	10.1	Collect information at the program-level.
1	2.888	2.494	10.1.3	Select (or design) and administer cognitive (knowledge) tests for evaluation purposes
2	2.272	1.678	10.1.7	Interact with and evaluate professional program-level curriculum viewpoints
3	1.916	1.864	10.1.4	Select (or design) and administer tests of attitudes for evaluation of the program
4	1.818	1.256	10.1.2	Design and administer forms for evaluation of programs by students
5	1.500	1.500	10.1.1	Conduct program-level follow-up study
6	1.428	1.223	10.1.6	Consult advisory committees to determine quality of instructional program
7	1.343	1.428	10.1.5	Select (or design) and administer tests of psychomotor abilities for evaluation of programs

Rank Order	Median (mdn)	IQR	Code	Tasks
8	2.506	2.054	2.0	DESIGN PROGRAMS
1	3.279	1.441	2.6	Collect tasks into appropriate instructional groups for teaching (e.g.; courses, units, etc.)
1	3.111	1.785	2.6.1	Identify student populations to be served as a basis for determining program experiences
2	2.307	1.242	2.6.2	Develop rationale for course(s) consistent with program-level rationale
3	2.145	0.864	2.6.4	Develop objectives for course(s) consistent with program-level objectives
4	1.750	1.400	2.6.3	Develop mission statement for course(s)
2	2.845	1.907	2.4	Analyze the study of society, industry and the individual to identify the problems and human needs toward which industrial education can make contributions.
1	3.450	1.872	2.4.1	Identify societal, industrial and individual problems toward which industrial education can contribute
2	3.000	2.500	2.4.2	Identify human needs including those of differing cultures
3	2.900	1.323	2.4.6	Structure the content from which to draw for program-level curriculum development
4	2.875	1.875	2.4.3	Examine previously proposed solutions and use or propose solutions to problems and ways to meet human needs through the program
5	2.833	1.345	2.4.4	Identify the jobs that need to be done toward which an industrial education program can contribute
6	1.909	1.312	2.4.5	Detail each job to be done in industrial education in terms of tasks to be performed for program-level curriculum development
3	2.754	2.474	2.2	Study the institution of industry within our society as a source of the body of knowledge for industrial education.
1	4.750	1.041	2.2.1	Read magazines and journals that focus on industry as part of the study of the institution of industry
2	4.050	1.625	2.2.6	Identify past, present and probable future impacts of industry on society
3	3.437	2.225	2.2.5	Develop and maintain an up to date industrial resource file

Rank Order	Median (mdn)	IQR	Code	Tasks
4.5	3.000	2.350	2.2.2	Decide upon basic functions of industry to be studied in the program
4.5	3.000	1.729	2.2.7	Study labor in industry as a basis for program-level curriculum development
6	2.785	1.888	2.2.4	Consult available industrial personnel as part of the study of the institution of industry
7	2.600	1.631	2.2.9	Establish tentative program-level goals for industrial education in relation to industry
8	2.441	1.209	2.2.3	Visit and observe representative industries as a source of the body of content for industrial education
9	1.315	1.123	2.2.8	Select published taxonomy or develop a taxonomy of industry
4	2.750	1.832	2.1	Study society in general and its problems in particular to maintain and improve the relevance of industrial education goals to society.
1	3.600	1.778	2.1.6	Identify contributions that industrial education can make toward the solution of societal problems
2	3.538	1.545	2.1.5	Relate current problems to industrial education programs
3	3.055	2.000	2.1.1	Read and interpret current and historical literature for program-level input
4	2.900	1.537	2.1.8	Try promising approaches and alternatives to meeting the needs of society through industrial education programs
5	2.666	1.793	2.1.2	Listen to and interact with presentations about current status and the future as input to program-level curriculum development
6	2.590	2.009	2.1.3	Make judgments about cause and effect in relating societal problems to industrial education programs
7	2.352	1.351	2.1.9	Establish tentative program-level goals for industrial education in relation to societal needs
8	2.333	1.666	2.1.4	Project trends and make predictions based on societies' problems and needs for program-level curriculum development
9	2.272	1.722	2.1.7	Consider alternative solutions to societal problems at the program planning level
10	2.230	1.330	2.1.10	Suggest program-level improvements in industrial education based on societal needs

Rank Order	Median (mdn)	IQR	Code	Tasks
5	2.500	3.073	2.7	Develop a plan for continual revision and improvement of programs.
1	4.613	1.160	2.7.3	Keep up with new literature related to general and industrial education for program improvement
2	2.909	1.847	2.7.1	Plan for student evaluation of courses and programs
3	1.416	3.416	2.7.4	Maintain a program-level instruction evaluation log book
4	1.343	2.028	2.7.2	Consult with industrial and educational advisory board
5	1.200	0.775	2.7.5	Prepare follow up studies of graduates of the program
6	2.394	1.746	2.5	Develop new and existing programs in terms of expected task outcomes.
1	3.222	1.757	2.5.5	Select tasks for which education and training are to be provided in the industrial education program(s)
2	2.500	1.700	2.5.6	Correlate the industrial education program as a sub-system of the total educational program
3	2.352	1.271	2.5.3	Develop program-level objectives
4	2.277	1.848	2.5.4	Establish criteria for selection of tasks for education and training programs
5	2.055	1.939	2.5.2	Develop program-level mission statement(s)
6	1.954	1.388	2.5.1	Develop program-level rationale(s)
7	2.346	1.816	2.8	Develop implementation strategies for new programs and changes in existing program.
1	4.593	1.265	2.8.2	Read current literature on educational change and change strategy
2	2.730	1.589	2.8.4	Consider the cultural values and past experiences of those persons who are supposed to make the change so that it is compatible to these values and experiences
3	2.714	1.738	2.8.11	Evaluate the effect of planned change on other curriculum areas and on the total curriculum
4.5	2.700	1.450	2.8.8	Develop alternate change strategies for program implementation
4.5	2.700	1.850	2.8.3	Re-examine the rationale and fully develop the reasons (advantages) for making proposed changes
6	2.187	1.902	2.8.5	Identify "opinion leaders" and enlist their support of proposed changes at the program level

Rank Order	Median (mdn)	IQR	Code	Tasks
7	2.093	1.009	2.8.10	Prepare budget for proposed program changes
8	2.000	1.507	2.8.9	Establish timetable for program change implementation
9	1.888	1.439	2.8.1	Establish curriculum implementation practices and sequence to move progressively from the existing system, through phases, into the planned system
10	1.600	1.366	2.8.7	Plan an educational program for the consumers of a proposed change so that they may see the value of the change
11	1.583	1.303	2.8.6	Plan an educational program for those who will implement the change so that the program and its ramifications are clearly understood
8	1.500	1.750	2.3	Study group cultures and principles of learning in order to relate instruction to the individuals for whom the program and instruction is being planned.
1	2.250	2.125	2.3.3	Identify appropriate learning principles for target populations at the program level
2	1.928	2.363	2.3.2	Examine the characteristics of group cultures to improve understanding of attitudes, needs, and interests of those making up the culture for program-level input
3	1.166	0.666	2.3.1	Identify various group cultures that may compose target populations for programs

Rank Order	Median (mdn)	IQR	Code	Tasks
9	2.136	2.690	7.0	PROVIDE PROFESSIONAL SERVICE
1	3.556	2.005	7.1	Advise and counsel students.
1	4.840	0.659	7.1.3	Recognize potential problems of students
2	4.676	1.254	7.1.6	Assist students in developing good study habits
3	4.166	1.791	7.1.8	Assist students with personal and occupational problems
4	4.076	1.528	7.1.1	Provide students with occupational information
5	3.916	1.562	7.1.7	Work with guidance counselors in assisting students
6	3.833	1.505	7.1.4	Hold individual student conferences
7	3.062	2.317	7.1.2	Administer subject matter diagnostic tests
8	2.961	1.427	7.1.5	Confer with parents concerning student educational development
9	2.750	2.100	7.1.11	Involve resource persons and agencies in assisting students
10	2.461	1.545	7.1.9	Write letters of recommendation
11	2.250	1.952	7.1.10	Assist students in securing and filling out job applications
2	3.278	1.870	7.4	Offer professional advice.
1	3.857	2.225	7.4.1	Make laboratory and facility planning suggestions
2	3.409	1.363	7.4.2	Suggest program and instruction improvements
3	2.818	1.825	7.4.3	Relate to administrators and school board to keep them informed of trends and new developments
3	2.324	3.088	7.3	Assist in general school duties.
1	4.571	1.452	7.3.2	Participate in non-instructional school duties
2	2.500	1.904	7.3.1	Assist new teachers in system to understand policies, regulations and social functions of school
3	1.343	2.890	7.3.3	Serve as class advisor
4	1.107	0.607	7.3.4	Sponsor student club activities
4	1.439	1.757	7.2	Participate in service activities of the educational and civic community.
1	3.100	1.800	7.2.2	Actively join in local, state, and national education activities
2	1.750	1.916	7.2.1	Serve on and chair school and community committees

Rank Order	Median (mdn)	IQR	Code	Tasks
3	1.090	0.590	7.2.4	Participate in school accreditation visits
4	1.066	0.566	7.2.3	Initiate and organize special community service committees as needed
5	1.317	1.161	7.6	Contribute to literature of the field through technical and/or professional writing.
1	2.178	1.654	7.6.1	Write proposals appropriate to needs of the discipline
2	1.225	0.929	7.6.3	Develop written instructional materials for publication
3	1.057	0.551	7.6.2	Write reviews of new tests, instructional aids, and media for education journals
6	1.298	1.982	7.7	Supervise student teachers.
1	3.625	2.500	7.7.6	Demonstrate effective techniques and methods for observation
2	1.750	2.107	7.7.1	Provide student-teacher with orientation to the school, classroom and community
3	1.375	2.562	7.7.9	Make formal evaluations of student-teacher's performance
4	1.294	3.638	7.7.8	Offer criticism, encouragement and suggestions in joint evaluation with student-teacher
5	1.294	1.915	7.7.4	Create situations so that the student teacher can initiate the instruction activities
6	1.178	0.827	7.7.3	Assign teaching responsibilities to student teacher
7	1.166	0.666	7.7.2	Prepare the class for the arrival of student teachers
8	1.153	0.653	7.7.5	Hold conferences with student teacher regarding his performance, progress and problems
9	1.115	0.615	7.7.7	Observe student teachers' performance in the classroom
7	1.114	0.611	7.5	Develop programs of professional service.
1	1.180	0.910	7.5.1	Organize and conduct workshops and in-service educational programs
2	1.129	0.629	7.5.4	Serve as advisor to educational suppliers in development of new resources and instructional materials
3	1.100	0.600	7.5.3	Initiate remedial and summer programs for students
4	1.040	0.541	7.5.2	Develop adult evening extension programs

Rank Order	Median (mdn)	IQR	Code	Tasks
10	1.849	1.921	8.0	UTILIZE RESEARCH
1	3.429	2.164	8.1	Identify needs (problems) amenable to research.
1	4.458	1.298	8.1.2	Identify causes and unfulfilled needs which contribute to classroom problems
2	3.333	1.547	8.1.4	Review available research applicable to identified problem
3	2.791	1.802	8.1.1	Develop an awareness of the need for solving educational problems through research
4	2.000	2.901	8.1.3	Estimate and evaluate factors such as time, cost and value as a basis for selection of a research problem
2	2.500	1.619	8.7	Apply decision-making process to the solution of instructional problems.
1	2.850	1.950	8.7.1	Analyze potential courses of action applicable to needs (problems) as suggested by research results
2	2.653	1.482	8.7.3	Take action based on decision from research evidence
3	2.625	2.125	8.7.2	Make decisions on courses of action to be taken based on research evidence
4	2.230	1.451	8.7.4	Evaluate action taken based on research findings
3	2.479	1.750	8.5	Cooperate in research effort of others.
1	3.023	0.952	8.5.2	Assess and respond to educational research instruments
2	2.550	1.450	8.5.1	Assist in implementation and evaluation of innovative programs
3	1.305	1.013	8.5.3	Organize and set-up pilot programs in cooperation with other researchers
4	1.900	1.631	8.6	Read and interpret research findings both as a consumer and as a researcher.
1	2.777	1.828	8.6.7	Determine potential application and usefulness of research findings to his own situation
2	2.192	1.322	8.6.5	Review the analysis of research data
3	2.166	1.516	8.6.1	Read the research report and identify the major parts
4	2.000	1.733	8.6.3	Evaluate the sampling procedures of research reports
5	1.705	1.170	8.6.2	Inspect research reports for adequate descriptions of the major elements of the research study

Rank Order	Median (mdn)	IQR	Code	Tasks
6	1.500	1.714	8.6.4	Assess the validity and reliability of research procedures
7	1.217	0.932	8.6.6	Evaluate the conclusions of a research report
5	1.813	1.783	8.3	Conduct proposed research.
1	2.000	1.706	8.3.3	Draw conclusions and project implications based on analysis of research data
2	1.642	1.604	8.3.2	Analyze and interpret data collected for research studies
3	1.600	2.169	8.3.1	Collect research data by appropriate methods, e.g.; historical, descriptive, experimental
6	1.409	1.604	8.2	Prepare proposals for researching a problem.
1	2.607	1.842	8.2.5	Select or develop an instrument appropriate to a researchable problem
2	2.000	1.937	8.2.1	Develop a concise statement of the research problem
3	1.875	1.600	8.2.3	Formulate objectives or hypotheses to be answered through research study
4	1.214	0.892	8.2.7	Develop a management strategy for the control of the research study
5	1.210	1.061	8.2.4	Select and describe the research design to be used in a proposed research study
6	1.200	0.792	8.2.8	Prepare a budget estimate in fiscal terms for a research study
7	1.129	0.629	8.2.9	Submit research proposal to appropriate funding bodies
8	1.125	0.625	8.2.5	Select a population for a particular research study
9	1.050	0.550	8.2.2	Write a rationale for a research study including a review of literature
7	1.184	0.684	8.4	Write research reports.
1	1.309	1.045	8.4.2	Formally review and revise preliminary draft of research report
2	1.200	0.983	8.4.1	Complete preparation of preliminary draft of research report, e.g.; introduction, methods, body, conclusions, implications, bibliography, appendices
3	1.074	0.574	8.4.3	Complete final draft of research report

APPENDIX B

IMPORTANCE OF TASKS

Tasks of Wisconsin Senior High School Industrial Education Teachers Ranked by Median (Mdn) Value of their Response to "Task Importance" and Including Interquartile Range (IQR)

Rank Order	Median (mdn)	IQR	Code	Tasks
1	4.379	1.341	5.0	FACILITATE LEARNING
1	4.544	1.263	5.2	Motivate students.
1	4.903	0.596	5.2.2	Win the students' attention and maintain level of arousal
2	4.840	0.659	5.2.6	Reward student achievement
3	4.500	1.125	5.2.8	Provide students immediate feedback to tests
4	4.444	1.343	5.2.1	Determine the entering dispositions of individual students
5	4.343	1.082	5.2.3	Vary classroom routine to prevent monotony and boredom
6	4.250	1.541	5.2.5	Recognize and encourage evidences of response to internal motivation
7	4.055	1.577	5.2.4	Recognize and encourage evidences of response to external motivation
8	4.000	1.580	5.2.7	Recognize and react to behavior which merits no reward
2	4.440	1.295	5.3	Interact with students in a positive manner.
1	4.854	0.645	5.3.3	Express interest in students
2	4.809	0.761	5.3.8	Express enthusiasm for your students and the subject matter
3	4.736	1.076	5.3.10	Demonstrate an attitude of fairness and commitment on issues important to students
4	4.700	0.984	5.3.7	Provide students with clear understandings of what is expected of them and what they can expect from their teacher
5	4.562	1.181	5.3.2	Establish atmosphere for positive group interaction
6	4.291	1.354	5.3.6	Use student interests in planning student activity
7	4.269	1.182	5.3.4	Make provision for student input into instruction
8	4.250	1.250	5.3.11	Use knowledge of students as a basis for positive interaction during instruction
9	4.052	0.868	5.3.1	Use processes of perceiving, communicating, knowing, co-responding patterning, decision-making, creating, valuing, problem solving, and learning in interacting with students
10	3.950	1.741	5.3.5	Plan individualized instruction with students
11	3.333	1.375	5.3.9	Recognize and interact with subcultures unique to the student population

Rank Order	Median (mdn)	IQR	Code	Tasks
3	4.299	1.591	5.1	Execute instructional plans and strategies.
1	4.923	0.576	5.1.4	Present lessons and related demonstrations
2	4.892	0.607	5.1.5	Be aware of whether students are working safely and take appropriate preventative and corrective measures
3	4.433	1.207	5.1.1	Identify individual needs of students
4	4.250	1.204	5.1.3	Make students aware of instructional intent and proposed outcomes of instruction
5	3.818	1.601	5.1.6	Use educational resources in executing instructional plans
6	3.428	1.171	5.1.7	Conduct field trips and other outside-class activities
7	3.350	1.397	5.1.2	Find out what students expect from the instruction
4	4.290	1.286	5.5	Teach the substantive content of the field.
1	4.600	1.300	5.5.2	Provide exploratory experience related to industry which will provide some students a basis for selecting an occupation and will provide all students respect for the pursuits of others
2	4.325	1.053	5.5.4	Provide experiences which some students may use as a base for developing avocational activities
3	4.250	1.370	5.5.5	Provide experiences which contribute to the teaching of students to use processes, e.g.; perceiving, communicating, learning, decision-making, organizing, co-responding, creating, valuing, problem-solving
4	4.181	1.542	5.5.1	Provide experiences which will contribute to the student's understanding of industry as a major element in our culture
5	4.142	1.255	5.5.3	Provide experiences for some students to prepare them for entry into appropriate industrially related occupations or to develop a base for advanced occupational education
5	4.223	1.356	5.4	Adjust plans and strategies based on observed feedback from students.
1	4.647	1.167	5.4.2	Modify instructional methods in the light of student feedback
2	4.555	1.599	5.4.8	Be sensitive to non-verbal feedback
3	4.346	1.283	5.4.5	Recognize and respond to external factors which influence planned instruction
4	4.291	1.258	5.4.1	Be sensitive to solicited and unsolicited student feedback

Rank Order	Median (mdn)	IQR	Code	Tasks
5	4.269	1.277	5.4.6	Capitalize on spontaneous student interests
6	4.055	1.166	5.4.3	Adjust the learning environment (facilities) to provide optimum learning conditions
7	3.954	1.523	5.4.7	Make final decisions on placement of instructional sequences for optimum effectiveness
8	3.833	1.347	5.4.4	Revise time allocations for instructional plans and strategies based on student feedback

Rank Order	Median (mdn)	IQR	Code	Tasks
2	4.431	1.411	6.0	MANAGE LEARNING ENVIRONMENT
1	4.627	1.175	6.3	Provide for maintenance.
1	4.760	0.908	6.3.4	Test and adjust tools and equipment prior to returning them to use after maintenance
2	4.666	1.249	6.3.2	Diagnose maintenance problems in tools and equipment
3	4.562	1.181	6.3.1	Develop and carry out a routine preventative maintenance schedule
4	4.350	1.262	6.3.3	Provide for maintenance by servicing or referral for service as appropriate
2	4.590	1.287	6.5	Respond to social-emotional climate.
1	4.903	0.596	6.5.2	Demonstrate firmness, fairness and consistency in dealing with discipline problems
2	4.869	0.630	6.5.7	Establish rapport and empathy with students
3	4.750	0.925	6.5.5	Be responsive to human needs of student
4	4.562	1.181	6.5.3	Develop alternate strategies for alleviating conditions which cause discipline problems
5	4.454	1.168	6.5.1	Identify internal and external causes of discipline problems
6	3.916	1.861	6.5.4	Use rewards and punishment to control deviant behavior
7	3.600	1.733	6.5.6	Use self-evaluation techniques regarding your inter-relationship with students
3	4.509	1.645	6.4	Maintain records and filing systems.
1	4.875	0.625	6.4.5	Keep records of student grades for each class taught
2	4.775	0.929	6.4.4	Keep a record of purchase orders and inventories
3	4.681	1.007	6.4.2	Keep student progress records for each class
4	4.666	1.333	6.4.1	Keep attendance records for each class taught
5	4.333	1.414	6.4.3	Keep equipment and tool inventories
6	4.000	1.846	6.4.7	Keep an up-to-date industrial and educational supply catalog file
7	2.357	2.164	6.4.6	Keep records of federal and state funding programs
4	4.421	1.396	6.2	Requisition and receive supplies and materials.
1	4.694	1.013	6.2.3	Order new educational materials and supplies
2	4.529	1.289	6.2.2	Prepare budgets for formal approval
3	4.208	1.758	6.2.4	Receive and check in supplies and materials
4	4.000	1.809	6.2.1	Take inventory of supplies and materials

Rank Order	Median (mdn)	IQR	Code	Tasks
5	4.207	1.557	6.6	Establish physical conditions conducive to learning.
1	4.736	0.962	6.6.1	Maintain control of comfortable temperature, lighting, and noise levels in classrooms and laboratories
2	4.710	1.105	6.6.3	Establish classroom procedures which avoid confusion and provide freedom of movement to students
3	3.333	1.158	6.6.2	Take actions to enhance the room interior with displays, bulletin boards, etc.
6	4.156	1.304	6.1	Plan for and organize the facilities needed for the program.
1	4.531	1.240	6.1.8	Prepare, submit, and defend budget requests for equipment and tools
2	4.529	1.608	6.1.7	Make an immediate and long range plan for acquisition of equipment and tools
3	4.500	1.192	6.1.4	Consult catalogs of industrial and educational supplies for specification of equipment available
4	4.333	1.214	6.1.5	Prepare a list of specific equipment and tools appropriate to program level and needs
5	4.200	1.300	6.1.3	Plan layout for effective space utilization to meet program needs
6	4.045	1.422	6.1.1	Identify and develop an industrial education program and the facility to house it
7	3.678	1.702	6.1.2	Write a program statement for your shop or laboratory
8	3.590	2.079	6.1.6	Write specifications for equipment and tools

Rank Order	Median (mdn)	IQR	Code	Tasks
3	4.037	1.556	1.0	IMPROVE INDIVIDUAL'S COMPETENCIES
1	4.194	1.386	1.1	Provide for re-generation and development of competencies.
1	4.444	1.343	1.1.3	Independently accept and solve technical and other problems related to teaching assignments
2	4.437	1.591	1.1.4	Accept professional assignments
3	4.366	1.056	1.1.1	Regenerate teaching skills and strategies
4	4.181	1.318	1.1.2	Improve your technical skills
5	3.590	1.401	1.1.5	Improve skills of interaction with others
2	4.063	1.465	1.3	Use self-evaluation techniques.
1	4.761	1.380	1.3.1	Select a teaching position for which you feel qualified
2	4.200	1.058	1.3.2	Participate in self-evaluation techniques
3	3.794	1.299	1.3.4	Periodically self-reflect and evaluate education and life philosophies
4	3.730	1.370	1.3.3	Consult supervisory and administrative evaluations for self-improvement
3	3.875	1.674	1.2	Keep up with development in the field.
1	4.617	1.169	1.2.3	Pursue further formal technical and professional education for self-improvement
2	4.450	1.461	1.2.2	Read current professional literature for self-improvement
3	3.650	1.397	1.2.6	Subscribe to educational and technical journals
4	3.590	1.327	1.2.5	Visit industries and consult with professional and technical personnel
5	3.541	1.565	1.2.1	Attend in-service seminars and workshops
6	3.388	1.875	1.2.4	Maintain membership in professional and technical organizations

Rank Order	Median (mdn)	IQR	Code	Tasks
4	3.975	1.673	4.0	NURTURE HUMANENESS
1	4.366	1.387	4.1	Nurture humaneness with students.
1	4.775	0.929	4.1.3	Maintain atmosphere where adventure in learning is encouraged without fear of consequences of failure
2	4.725	1.154	4.1.2	Admit that teachers also make mistakes and learn from them
3	4.695	0.993	4.1.4	Encourage, recognize and acknowledge original ideas of students--even though imperfect and unfinished
4	4.666	1.333	4.1.10	Provide personal guidance to students
5	4.617	1.058	4.1.5	Take time to listen to students and acknowledge their ideas and commitments as being worthy of expression
6	4.613	1.074	4.1.9	Encourage students to know that they are respected as individuals
7	4.500	1.700	4.1.11	Extend the positive student-teacher relationship to include informal contacts
8	4.125	1.254	4.1.6	Help students interpret their relationship to their environment
9	3.972	0.861	4.1.1	Encourage students to think of alternatives and to recognize knowledge as imperfect, incomplete, and tentative
10	3.818	1.352	4.1.8	Develop group and team learning situations to foster in students a mutual concern for one another
11	2.437	2.377	4.1.7	De-emphasize inter-student competition in the classroom as a basis for student achievement
2	4.159	1.448	4.4	Nurture humaneness to one's self.
1	4.181	1.633	4.4.1	Employ teacher traits in balance between those required for individual self-fulfillment and those required for successful teaching
2	4.136	1.232	4.4.2	Reassess personal objectives and take action to continue growth towards self-actualizing
3	3.805	1.695	4.2	Nurture humaneness with the school staff.
1	4.736	1.011	4.2.1	Accept assistance from and give assistance to fellow staff members
2	4.710	1.305	4.2.5	Employ tact and judgment in interacting with other school staff members
3	4.000	1.000	4.2.6	Offer recommendations in matters of school policy
4	3.363	1.500	4.2.2	Obtain and lend assistance to school projects being developed by other staff members

Rank Order	Median (mdn)	IQR	Code	Tasks
5	3.250	1.238	4.2.4	Serve on and cooperate with school staff committees
6	3.066	1.158	4.2.3	Participate in school staff social events
4	3.401	1.452	4.3	Nurture humaneness with parents and community.
1	4.000	0.833	4.3.4	Make provisions for personal contacts with parents concerning the progress of their children
2	3.611	1.805	4.3.5	Identify and respect goals parents have for their children
3	3.583	1.266	4.3.7	Work with community service personnel, e.g.; Librarians, social workers, clergy, training schools
4	3.307	1.428	4.3.1	Participate in community activities and service organizations
5	3.235	1.285	4.3.6	Become familiar with services provided by the community, e.g.; public library, museums, other schools, cultural center, etc.
6	3.117	1.280	4.3.3	Participate in parent-teacher functions
7	2.812	1.712	4.3.2	Evidence interest in graduated students

Rank Order	Median (mdn)	IQR	Code	Tasks
5	3.919	1.549	3.0	DESIGN INSTRUCTION
1	4.197	1.514	3.4	Develop (or identify) student learning activities appropriate to each behavioral objective (make the content operational).
1	4.775	1.220	3.4.6	Plan experiences which will contribute to teaching students how to use processes, e.g.; perceiving, communicating, learning, decision making, organizing, co-responding, creating, valuing, problem solving
2	4.400	1.314	3.4.5	Plan experiences which some students may use as a base for developing avocational activities
3	4.357	1.764	3.4.3	Plan exploratory experiences related to industry which will provide some students a base for occupational choice and all students a respect for the pursuits of others
4	4.333	1.609	3.4.7	Develop alternative learning activities to provide for individual student needs
5	4.071	1.298	3.4.4	Plan experiences for some students which will prepare them for entry into industrially related occupations or to develop a base for advanced occupational education
6	3.911	1.220	3.4.2	Plan experiences which will contribute to the students' understanding of industry as a major element in our culture
7	3.818	1.581	3.4.1	Consult resources to identify learning activities
2	4.163	1.287	3.5	Select teaching activities and strategies.
1	4.363	1.237	3.5.2	Integrate learning and teaching activities into instructional plans
2	4.125	1.133	3.5.3	Make decisions concerning the extent to which the instruction is to be individualized
3	4.038	1.519	3.5.1	Plan strategies for teaching including meeting the needs of special groups
3	4.065	1.426	3.6	Identify and prepare instructional resources.
1	4.847	0.652	3.6.5	Prepare instructional materials
2	4.178	1.321	3.6.4	Review and select written resources for instruction
3	4.000	1.145	3.6.3	Review and select audio-visual resources
4	3.694	1.182	3.6.2	Review and select industrial resources
5	3.681	1.532	3.6.1	Review and select personnel resources

Rank Order	Median (mdn)	IQR	Code	Tasks
4	4.038	1.513	3.9	Prepare lesson plans for group and individualized instruction.
1	4.617	1.108	3.9.2	Identify and select learning activities for students
2	4.450	1.257	3.9.6	Keep records of lessons planned and suggestions for improvement
3	4.200	1.162	3.9.7	Sequence presentation of instructional materials
4	4.083	1.222	3.9.4	Identify and select appropriate learning resources
5	3.954	1.458	3.9.3	Identify and select appropriate teacher activities
6	3.818	1.797	3.9.1	Write objectives for lesson plans
7	3.218	1.367	3.9.5	Validate content against levels within domains for lesson plans
5	3.875	1.642	3.2	Organize objectives into appropriate sequences.
1	4.500	1.437	3.2.2	Group and sequence performance objectives into appropriate units of instruction
2	3.464	1.425	3.2.1	Identify which objectives are dependent on other objectives for their attainment
6	3.837	1.695	3.1	Write performance objectives for each course.
1	4.318	1.234	3.1.2	Identify student behavior or product of student behavior
2	3.888	1.928	3.1.3	Identify conditions under which student behavior modification will take place
3	3.833	1.810	3.1.4	Identify performance standard for performance objectives
4	3.555	1.704	3.1.1	Identify student population who will receive instruction
5	3.545	1.390	3.1.5	Write the performance objective at the appropriate level and domain
7	3.802	1.502	3.7	Develop a strategy for evaluating instruction.
1	4.281	1.218	3.7.2	Formulate a grading policy and plans for making it known to students
2	4.133	1.220	3.7.4	Plan for written and manipulative performance tests
3	3.535	1.486	3.7.5	Plan for student evaluation of course
4	3.500	1.306	3.7.3	Plan for self-evaluation techniques to be used by students
5	3.111	1.776	3.7.1	Decide whether evaluation will employ norm-based or mastery grading procedures

Rank Order	Median (mdn)	IQR	Code	Tasks
8	3.684	1.379	3.3	Validate content against domains and against levels within domains.
1	4.000	1.062	3.3.6	Make any needed adjustments to content by levels within each domain
2	3.833	1.291	3.3.1	Decide whether each domain should be represented and the balance of content which should be devoted to each
3	3.750	1.266	3.3.3	Make adjustments to content within domains to obtain needed balance
4	3.666	1.666	3.3.4	Decide which levels within each domain should be represented and the balance of content that should be devoted to each
5	3.400	1.361	3.3.5	Observe whether the desired levels within domains are represented and what their balance is
6	3.111	1.383	3.3.2	Observe that the desired domains are represented and what their balance is
9	3.487	1.480	3.8	Organize and complete the course of study.
1	3.833	1.308	3.8.2	Write course description
2	3.500	1.263	3.8.4	Arrange for the preparation of total course of study copy and subsequent distribution
3	3.409	1.454	3.8.3	Prepare a time-range plan suggesting a range of time allotted to each unit of instruction
4	3.062	1.902	3.8.1	Write introduction to course of study

Rank Order	Median (mdn)	IQR	Code	Tasks
6	3.763	1.447	10.0	EVALUATE PROGRAMS
1	4.016	1.050	10.4	Determine effectiveness of program implementation.
1	4.289	1.041	10.4.2	Evaluate quality of instruction and teacher-student interrelationship within the program
2	4.227	1.329	10.4.6	Review sequences of courses comprising the program
3	4.108	0.854	10.4.4	Assess adequacy of instructional materials for carrying out learning activities at the program level
4	4.031	0.906	10.4.3	Determine appropriateness of course objectives in fulfilling student needs at the program level
5	3.861	1.013	10.4.5	Assess appropriateness of learning activities to the program
6	3.321	1.315	10.4.1	Assess validity of original sources of curriculum content at the program level
2	3.879	1.356	10.3	Determine output characteristics of students.
1	4.285	1.340	10.3.1	Assess the degree of student achievement of program objectives
2	3.882	1.062	10.3.5	Determine whether students enjoy the curriculum and are generally happy with it
3	3.850	1.500	10.3.3	Determine the degree to which the industrial education program satisfies societal, industrial and individual needs
4	3.681	1.522	10.3.2	Review program-level follow-up studies to ascertain the usefulness of material learned
5	3.550	1.350	10.3.4	Compare present students achievement with previous student achievements in the program
3	3.813	1.516	1.02	Assess factors influencing program.
1	4.147	1.180	10.2.3	Review adequacy and utilization of facilities for program
2	3.958	1.450	10.2.1	Determine interests, abilities and experiences of students entering the program
3	3.928	1.693	10.2.2	Review teacher competencies with respect to program-level goals
4	3.733	1.311	10.2.4	Determine utilization made of community resources in program-level development
5	2.950	1.531	10.2.5	Determine the degree of articulation with general, college preparatory and vocational programs

Rank Order	Median (mdn)	IQR	Code	Tasks
4	3.256	1.455	10.1	Collect information at the program-level.
1	3.950	1.718	10.1.3	Select (or design) and administer cognitive (knowledge) tests for evaluation of program
2	3.346	1.230	10.1.7	Interact with and evaluate professional program-level curriculum viewpoints
3	3.312	1.496	10.1.5	Select (or design) and administer tests of psychomotor abilities for evaluation of programs
4	3.250	1.532	10.1.1	Conduct program-level follow-up study
5	3.133	1.025	10.1.2	Design and administer forms for evaluation of programs by students
6	3.083	1.285	10.1.4	Select (or design) and administer tests of attitudes for evaluation of the program
7	3.000	1.416	10.1.6	Consult advisory committees to determine quality of instructional program

Rank Order	Median (mdn)	IQR	Code	Tasks
7	3.677	1.575	9.0	EVALUATE INSTRUCTION
1	4.069	1.375	9.1	Assess whether students have assimilated the material presented.
1	4.153	1.178	9.1.2	Determine whether students met performance standards
2	4.038	1.393	9.1.3	Apply methods to be used to evaluate instruction
3	4.000	1.607	9.1.1	Use the evaluation policy which was previously made known to students
2	3.754	1.483	9.4	Determine efficiency and effectiveness of instruction.
1	4.323	1.031	9.4.5	Appraise student performance in relation to instructional goals
2	4.000	1.636	9.4.6	Determine whether students are generally happy with the instruction received
3	3.750	1.750	9.4.1	Analyze and interpret results of instructional measurement
4	3.705	1.272	9.4.2	Consult with colleagues regarding assessment of your teaching
5	3.458	1.497	9.4.3	Analyze student evaluation of instruction
6	3.107	1.510	9.4.4	Compare pretest and posttest results
3	3.555	1.540	9.3	Administer evaluative experiences.
1	4.088	1.230	9.3.3	Administer written and manipulative performance tests
2	3.576	1.567	9.3.2	Conduct student self-evaluation procedures
3	3.541	1.854	9.3.1	Administer pretests and posttests
4	3.444	1.536	9.3.4	Maintain a daily instruction evaluation log book
5	2.884	1.384	9.3.5	Administer standardized tests
4	3.513	1.706	9.2	Construct and evaluate measuring instruments and procedures.
1	4.000	1.825	9.2.7	Evaluate tests in terms of usability, objectivity, difficulty, and discrimination
2	3.900	1.555	9.2.5	Develop pretests and posttests
3	3.882	1.362	9.2.2	Formulate devices to measure cognitive (knowledge-type) behavior
4	3.875	1.258	9.2.6	Analyze test instrument validity and reliability
5	3.500	1.622	9.2.3	Formulate devices to measure affective behavior (e.g.; attitudes and values)

Rank Order	Median (mdn)	IQR	Code	Tasks
6	3.423	1.412	9.2.1	Devise self-evaluation techniques for use by students
7	3.318	1.318	9.2.4	Formulate devices to measure psychomotor (manipulative skill type) behavior
8	1.227	1.036	9.2.8	Use computer to assist in analyzing test results

Rank Order	Median (mdn)	IQR	Code	Tasks
8	3.517	1.828	7.0	PROVIDE PROFESSIONAL SERVICE
1	4.043	1.442	7.4	Offer professional advice.
1	4.437	1.450	7.4.1	Make laboratory and facility planning suggestions
2	4.000	1.333	7.4.2	Suggest program and instruction improvements
3	3.866	1.358	7.4.3	Relate to administrators and school board to keep them informed of trends and new developments
2	3.955	1.999	7.7	Supervise student teachers.
1	4.812	0.822	7.7.8	Offer criticism, encouragement and suggestions in joint evaluation with student-teacher
2	4.300	2.121	7.7.7	Observe student teachers' performance in the classroom
3	4.250	1.659	7.7.5	Hold conferences with student teacher regarding his performance, progress and problems
4	4.166	1.613	7.7.6	Demonstrate effective techniques and methods for observation
5	3.888	1.604	7.7.4	Create stiuations so that the student teacher can initiate the instruction activities
6	3.666	1.791	7.7.1	Provide student-teacher with orientation to the school, classroom and community
7	3.600	2.233	7.7.3	Assign teaching responsibilities to student teacher
8	3.500	3.000	7.7.2	Prepare the class for the arrival of student teachers
9	3.500	1.702	7.7.9	Make formal evaluations of student-teacher's performance
3	3.862	1.544	7.1	Advise and counsel students.
1	4.595	1.297	7.7.1	Provide students with occupational information
2	4.533	1.035	7.1.3	Recognize potential problems of students
3	4.409	1.188	7.1.6	Assist students in developing good study habits
4	4.227	1.329	7.1.7	Work with guidance counselors in assisting students
5	4.000	0.966	7.1.8	Assist students with personal and occupational problems
6	3.766	1.283	7.1.4	Hold individual student conferences
7	3.533	1.454	7.1.11	Involve resource persons and agencies in assisting students
8	3.406	1.376	7.1.9	Write letters of recommendation
9	3.375	1.749	7.1.10	Assist students in securing and filling out job applications

Rank Order	Median (mdn)	IQR	Code	Tasks
10	3.269	1.495	7.1.5	Confer with parents concerning student educational development
11	3.233	1.476	7.1.2	Administer subject matter diagnostic tests
4	2.947	1.185	7.2	Participate in service activities of the educational and civic community.
1	3.562	1.812	7.2.2	Actively join in local, state, and national education activities
2	2.944	1.875	7.2.1	Serve on and chair school and community committees
3	2.666	2.183	7.2.4	Participate in school accreditation visits
4	2.450	1.579	7.2.3	Initiate and organize special community service committees as needed
5	2.903	2.006	7.3	Assist in general school duties.
1	3.850	1.629	7.3.1	Assist new teachers in system to understand policies, regulations and social functions of school
2	2.900	1.421	7.3.2	Participate in non-instructional school duties
3	2.785	2.183	7.3.3	Serve as class advisor
4	2.000	1.989	7.3.4	Sponsor student club activities
6	2.796	2.233	7.6	Contribute to literature of the field through technical and/or professional writing.
1	3.900	1.133	7.6.1	Write proposals appropriate to needs of the discipline
2	2.166	1.925	7.6.3	Develop written instructional materials for publication
3	1.954	1.710	7.6.2	Write reviews of new tests, instructional aids, and media for education journals
7	2.782	1.773	7.5	Develop programs of professional service.
1.5	2.900	1.266	7.5.1	Organize and conduct workshops and in-service educational programs
1.5	2.900	2.000	7.5.3	Initiate remedial and summer programs for students
3	2.777	1.793	7.5.4	Serve as advisor to educational suppliers in development of new resources and instructional materials
4	2.000	2.166	7.5.2	Develop adult evening extension programs

Rank Order	Median (mdn)	IQR	Code	Tasks
9	3.473	1.535	2.0	DESIGN PROGRAMS
1	3.763	1.562	2.2	Study the institution of industry within our society as a source of the body of knowledge for industrial education.
1	4.291	1.208	2.2.1	Read magazines and journals that focus on industry as part of the study of the institution of industry
2	3.944	1.741	2.2.2	Decide upon basic functions of industry to be studied in the program
3	3.933	1.023	2.2.4	Consult available industrial personnel as part of the study of the institution of industry
4	3.928	1.857	2.2.5	Develop and maintain an up to date industrial resource file
5	3.847	1.004	2.2.3	Visit and observe representative industries as a source of the body of content for industrial education
6	3.800	1.500	2.2.6	Identify past, present and probable future impacts of industry on society
7	3.687	1.616	2.2.7	Study labor in industry as a basis for program-level curriculum development
8	3.466	1.552	2.2.9	Establish tentative program-level goals for industrial education in relation to industry
9	2.750	1.517	2.2.8	Select published taxonomy or develop a taxonomy of industry
2	3.625	1.813	2.7	Develop a plan for continual revision and improvement of programs.
1	4.333	1.133	2.7.3	Keep up with new literature related to general and industrial education for program improvement
2	3.666	1.525	2.7.1	Plan for student evaluation of courses and programs
3	3.166	1.375	2.7.2	Consult with industrial and educational advisory board
4	2.928	2.333	2.7.5	Prepare follow up studies of graduates of the program
5	2.916	3.033	2.7.4	Maintain a program-level instruction evaluation log book
3	3.557	1.597	2.6	Collect tasks into appropriate instructional groups for teaching (e.g., courses, units, etc.)
1	4.000	1.377	2.6.4	Develop objectives for course(s) consistent with program-level objectives
2	3.850	1.360	2.6.1	Identify student populations to be served as a basis for determining program experiences

Rank Order	Median (mdn)	IQR	Code	Tasks
3	3.272	1.690	2.6.2	Develop rationale for course(s) consistent with program-level rationale
4	2.777	1.722	2.6.3	Develop mission statement for course(s)
4	3.508	1.497	2.5	Develop new and existing programs in terms of expected task outcomes.
1	3.928	1.333	2.5.3	Develop program-level objectives
2	3.894	1.076	2.5.5	Select tasks for which education and training are to be provided in the industrial education program(s)
3	3.500	1.625	2.5.6	Correlate the industrial education program as a sub-system of the total educational program
4	3.312	1.763	2.5.4	Establish criteria for selection of tasks for education and training programs
5	3.041	1.104	2.5.1	Develop program-level rationale(s)
6	2.900	1.700	2.5.2	Develop program-level mission statement(s)
5	3.500	1.370	2.4	Analyze the study of society, industry and the individual to identify the problems and human needs toward which industrial education can make contributions.
1	3.777	1.585	2.4.6	Structure the content from which to draw for program-level curriculum development
2	3.750	1.392	2.4.1	Identify societal, industrial and individual problems toward which industrial education can contribute
3	3.590	1.327	2.4.4	Identify the jobs that need to be done toward which an industrial education program can contribute
4	3.464	1.397	2.4.2	Identify human needs including those of differing cultures
5	3.350	1.445	2.4.3	Examine previously proposed solutions and use or propose solutions to problems and ways to meet human needs through the program
6	3.115	1.072	2.4.5	Detail each job to be done in industrial education in terms of tasks to be performed for program-level curriculum development
6	3.373	1.430	2.1	Study society in general and its problems in particular to maintain and improve the relevance of industrial education goals to society.
1	3.961	1.276	2.1.6	Identify contributions that industrial education can make toward the solution of societal problems
2	3.815	1.315	2.1.5	Relate current problems to industrial education programs

Rank Order	Median (mdn)	IQR	Code	Tasks
3	3.576	1.374	2.1.8	Try promising approaches and alternatives to meeting the needs of society through industrial education programs
4	3.500	1.336	2.1.10	Suggest program-level improvements in industrial education based on societal needs
5	3.392	1.263	2.1.2	Listen to and interact with presentations about current status and the future as input to program-level curriculum development
6	3.307	1.401	2.1.7	Consider alternative solutions to societal problems at the program planning level
7	3.147	1.130	2.1.9	Establish tentative program-level goals for industrial education in relation to societal needs
8	3.136	1.500	2.1.1	Read and interpret current and historical literature for program-level input
9	3.133	1.066	2.1.4	Project trends and make predictions based on societies' problems and needs for program-level curriculum development
10	2.807	1.411	2.1.3	Make judgments about cause and effect in relating societal problems to industrial education programs
7	3.360	1.537	2.8	Develop implementation strategies for new programs and changes in existing program.
1	4.285	1.645	2.8.10	Prepare budget for proposed program changes
2	4.062	1.615	2.8.2	Read current literature on educational change and change strategy
3	3.500	1.687	2.8.3	Re-examine the rationale and fully develop the reasons (advantages) for making proposed changes
4	3.450	1.419	2.8.9	Establish timetable for program change implementation
5	3.423	1.376	2.8.8	Develop alternate change strategies for program implementation
6	3.400	1.300	2.8.1	Establish curriculum implementation practices and sequence to move progressively from the existing system, through phases, into the planned system
7	3.281	1.412	2.8.11	Evaluate the effect of planned change on other curriculum areas and on the total curriculum
8	3.222	1.758	2.8.6	Plan an educational program for those who will implement the change so that the program and its ramifications are clearly understood
9	3.208	1.518	2.8.5	Identify "opinion leaders" and enlist their support of proposed changes at the program level

Rank Order	Median (mdn)	IQR	Code	Tasks
10	3.105	1.076	2.8.4	Consider the cultural values and past experiences of those persons who are supposed to make the change so that it is compatible to these values and experiences
11	2.500	2.000	2.8.7	Plan an educational program for the consumers of a proposed change so that they may see the value of the change
8	2.929	1.906	2.3	Study group cultures and principles of learning in order to relate instruction to the individuals for whom the program and instruction is being planned.
1	3.350	1.481	2.3.3	Identify appropriate learning principles for target populations at the program level
2	3.150	1.526	2.3.2	Examine the characteristics of group cultures to improve understanding of attitudes, needs, and interests of those making up the culture for program-level input
3	2.071	1.880	2.3.1	Identify various group cultures that may compose target populations for programs

Rank Order	Median (mdn)	IQR	Code	Tasks
10	2.859	1.769	8.0	UTILIZE RESEARCH
1	3.588	1.602	8.1	Identify needs (problems) amenable to research.
1	4.400	1.172	8.1.2	Identify causes and unfulfilled needs which contribute to classroom problems
2	3.416	1.968	8.1.3	Estimate and evaluate factors such as time, cost and value as a basis for selection of a research problem
3	3.285	1.200	8.1.4	Review available research applicable to identified problem
4	3.117	1.420	8.1.1	Develop an awareness of the need for solving educational problems through research
2	3.230	1.281	8.7	Apply decision-making process to the solution of instructional problems.
1	3.500	2.599	8.7.2	Make decisions on courses of action to be taken based on research evidence
2	3.441	1.184	8.7.1	Analyze potential courses of action applicable to needs (problems) as suggested by research results
3	3.131	1.127	8.7.3	Take action based on decision from research evidence
4	3.000	1.510	8.7.4	Evaluate action taken based on research findings
3	3.200	1.366	8.5	Cooperate in research effort of others.
1	3.733	1.252	8.5.1	Assist in implementation and evaluation of innovative programs
2	3.150	1.241	8.5.2	Assess and respond to educational research instruments
3	2.846	1.427	8.5.3	Organize and set-up pilot programs in cooperation with other researchers
4	2.827	1.514	8.6	Read and interpret research findings both as a consumer and as a researcher.
1	3.277	1.499	8.6.7	Determine potential application and usefulness of research findings to his own situation
2	2.958	1.475	8.6.5	Review the analysis of research data
3	2.944	1.000	8.6.1	Read the research report and identify the major parts
4	2.875	1.312	8.6.4	Assess the validity and reliability of research procedures

Rank Order	Median (mdn)	IQR	Code	Tasks
5	2.722	1.625	8.6.3	Evaluate the sampling procedures of research reports
6	2.541	1.458	8.6.2	Inspect research reports for adequate descriptions of the major elements of the research study
7	2.333	1.972	8.6.6	Evaluate the conclusions of a research report
5	2.809	1.399	8.3	Conduct proposed research.
1	3.031	1.174	8.3.3	Draw conclusions and project implications based on alaysis of research data
2	2.777	1.513	8.3.1	Collect research data by appropriate methods, e.g., historical, descriptive, experimental
3	2.444	1.388	8.3.2	Analyze and interpret data collected for research studies
6	2.385	1.874	8.2	Prepare proposals for researching a problem.
1	3.105	0.994	8.2.6	Select or develop an instrument appropriate to a researchable problem
2	3.083	2.460	8.2.8	Prepare a budget estimate in fiscal terms for a research study
3	2.555	1.982	8.2.4	Select and describe the research design to be used in a proposed research study
4	2.450	1.419	8.2.1	Develop a concise statement of the research problem
5	2.416	2.218	8.2.9	Submit research proposal to appropriate funding bodies
6	2.382	1.358	8.2.3	Formulate objectives or hypotheses to be answered through research study
7	2.105	1.577	8.2.7	Develop a management strategy for the control of the research study
8	1.857	1.739	8.2.5	Select a population for a particular research study
9	1.300	1.100	8.2.2	Write a rationale for a research study including a review of literature
7	1.725	1.789	8.4	Write research reports.
1	2.333	1.973	8.4.1	Complete preparation of preliminary draft of research report, e.g., introduction, methods, body, conclusions, implications, bibliography, appendices
2	1.666	1.895	8.4.2	Formally review and revise preliminary draft of research report
3	1.406	1.265	8.4.3	Complete final draft of research report